



NOSA CERTIFICATION AUTHORITY LTDA.

***Gold Mining Operations
Summary Audit Report Form***

for

***Jacobina Mineração e Comércio Ltda/
Yamana Gold Group.***

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SUMMARY AUDIT REPORT

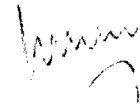
Name of Mine: Jacobina Mineração e Comércio Ltda.
Name of Mine Owner: Yamana Gold Inc.
Name of Mine Operator: Jacobina Mineração e Comércio Ltda.
Name of Responsible Manager: Edvaldo alves Amaral Jr.
Address: Fazenda Itapecuru, s/n (zona rural),
44700-000, Jacobina, BA, Brasil.
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Location detail and description of operation:

The Jacobina Mineração e Comércio is located in a complex at underground mines called: Morro do Vento, João Belo, Canavieiras and Basal. Mines are located in north-central portion of Bahia state, on the western most edge of Chapada Diamantina.

A metallurgical plant with a production capacity of 10000 tons per day is situated in the Serra da Jacobina, Jacobina city, Bahia state. The administrative complex and operate mining are situated near the Itapicuru Village, 10 km from the Jacobina city and 358 km of Salvador northwest.

The Jacobina Mineração e Comércio metallurgical plant operates in CIP (Carbon in Pulp) equipped with: primary and secondary crushing and tertiary with two ball mills and a set of 18 tanks for the metallurgical process of leaching and CIP. The complex also endowed with a tailings dam provided with a set of pumps called closed-loop pickup water from the tailings dam for the operation of the plant.



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Auditor's Finding

This operation is

- in full compliance
- in substantial compliance *(see below)
- not in compliance

with the International Cyanide Management Code.

* The Corrective Action Plan to bring an operation in substantial compliance into full compliance must be enclosed with this Summary Audit Report. The plan must be fully implemented within one year of the date of this audit.

Audit Company: NOSA Certification Authority Brasil Ltda.

Audit Team Leader: Celso Sandt Pessoa

E-mail: celsopessoa@ncabrazil.com.br

Names and Signatures of Other Auditors:

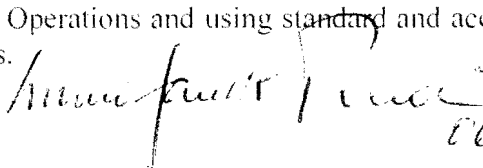
Eberson Cassio de Andrade (ICMI qualified lead auditor and TEA (mining operations).



Date(s) of Audit: 03 ~ 07/05/2010 (on-site), 05 ~ 09/07/2010 (on-site) and 20 ~ 22/09/2010 (off-site).

I attest that I meet the criteria for knowledge, experience and conflict of interest for Code Verification Audit Team Leader, established by the International Cyanide Management Institute and that all members of the audit team meet the applicable criteria established by the International Cyanide Management Institute for Code Verification Auditors.

I attest that this Summary Audit Report accurately describes the findings of the verification audit. I further attest that the verification audit was conducted in a professional manner in accordance with the International Cyanide Management Code Verification Protocol for Gold Mine Operations and using standard and accepted practices for health, safety and environmental audits.



06/10/2011

Este documento só terá efeito no território nacional e para valer, deverá ser assinado e registrado e traduzido art. 140-CCB e Prov. 58.89 -Item 67 - NCGJ

PROCURADOR GERAL DO ESTADO DO RIO GRANDE DO NORTE

Procurador de Assistência Jurídica: CELSO SANDT PESSOA, a qual compareceu com o usuário depositado em Cartório.

São Paulo, 02 de Abril de 2011

Em testemunha da verdade,

Atílio Fernandes Peres - Esc. Autor. (11040170033) (11040170033) (11040170033) (11040170033) (11040170033) (11040170033) (11040170033) (11040170033) (11040170033) (11040170033)

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CELSO SANDT PESSOA
Auditor
1042AB009780

SUMMARY AUDIT REPORT

1. PRODUCTION: *Encourage responsible cyanide manufacturing by purchasing from manufacturers who operate in a safe and environmentally protective manner.*

Standard of Practice 1.1: *Purchase cyanide from manufacturers employing appropriate practices and procedures to limit exposure of their workforce to cyanide, and to prevent releases of cyanide to the environment.*

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 1.1
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Reviewing the operation contract management procedures, it was evidenced that the requirements related to the acquisition of cyanide are clearly defined and it is mandatory that the cyanide be purchased from ICMI certified producers and transported by ICMI certified transporters. The operation did sign a contract (April 2010) with Proquigel (ICMI certified producer), related to the acquisition of cyanide solution (33%), that shall be delivered at the operation premises (CIF), by an ICMI certified transporter (Concórdia Transportes). The contract was reviewed during the audit, as well as the audit reports for Proquigel and Concórdia. The origin of the cyanide was evidenced during the field audit, during the reception of the cyanide, where the cyanide ISO-container and the documentation are fully traceable to Proquigel, the cyanide producer. The operation does not acquire the cyanide solution from distributors.

2. TRANSPORTATION: *Protect communities and the environment during cyanide transport.*

Standard of Practice 2.1: *Establish clear lines of responsibility for safety, security, release prevention, training and emergency response in written agreements with producers, distributors and transporters.*

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 2.1
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

It was evidenced, reviewing the contracts between the operation and the producer (Proquigel) and the producer with the transporter (Concórdia), that general and specific responsibilities are clearly addressed on both of them. The cyanide solution is transported into ISO-containers, specifically designed for this purpose, fully labeled according Brazilian road transportation laws, and the necessary information in Portuguese. The operation is around 300Km from the producer premises. The cyanide is transported through an asphalted route, previously selected, in common agreement, by the operation, the producer and the transporter. A risk assessment of the selected route was evidenced. The transportation route can not be changed without the authorization of the operation. The cyanide is transported straight from the producer to the operation, without any kind of interim storage.

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The operation established a cyanide reception procedure, in order to verify the truck condition (and maintenance) and permits, the driver permits and qualifications, the emergency responses resources (including emergency contacts) and the cyanide documentation. This procedure was evidenced to be implemented during the field audit.

Standard of Practice 2.2: *Require that cyanide transporters implement appropriate emergency response plans and capabilities and employ adequate measures for cyanide management.*

The operation is in full compliance with
 in substantial compliance with Standard of Practice 2.2
 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

As previously mentioned, the cyanide solution is transported into the operation by an ICMI certified transporter (Concórdia Transportes), which has specific cyanide related emergency response plans. The cyanide solution is transported straight from the producer to the operation, without any interim storage or changing of transporter. The cyanide solution documentation is verified in reception control at the operation, and is fully traceable to the producer. If any non conformance raises during the cyanide solution reception happens, the cyanide truck is not allowed to go into the operation.

3. HANDLING AND STORAGE: *Protect workers and the environment during cyanide handling and storage.*

Standard of Practice 3.1: *Design and construct unloading, storage and mixing facilities consistent with sound, accepted engineering practices, quality control/quality assurance procedures, spill prevention and spill containment measures.*

The operation is in full compliance with
 in substantial compliance with Standard of Practice 3.1
 not in compliance with

Summarize the basis for this Finding/Deficiencies Identified: (Due to the sensitivity of security issues regarding storage of cyanide, no descriptions of substantial or non-compliance with this aspect of the Standard of Practice should be provided.)

It was evidenced during the field audit that the operation constructed a brand new cyanide unloading area, which was constructed in accordance with the Brazilian civil engineering requirements (as evidenced in the project documentation, the as built and quality assurance records). The cyanide unloading area was constructed in a restricted area, where only authorized and qualified personnel are allowed to go in, under roof, with a drainage system, monitored by cameras from the control room and the floor was made in concrete. The unloading operation is performed by qualified operators, and monitored by a third operator in the control room. All the necessary maneuvers are documented in work instructions. The unloading area also contains

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specific tanks, equipped with level sensor and the area is also equipped with HCN fixed sensors. The operators have also portable HCN sensor, during the unloading activity. The unloading area is naturally ventilated and, in the event of any spills, the area has a drainage system linked with a secondary pool, beyond the secondary containments.

Standard of Practice 3.2: *Operate unloading, storage and mixing facilities using inspections, preventive maintenance and contingency plans to prevent or contain releases and control and respond to worker exposures.*

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 3.2
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The operation uses cyanide solution (33%) which is brought to the operation in ISO-containers, specifically designated for this purpose, which is returned to the cyanide producer (Proquigel) just after the unloading activity is concluded, by the cyanide transporter (Concórdia Transportes).

Before departing the operation, the truck is verified to be in conformance, without any kind of leakage and completely empty.

The unloading activity is performed in accordance with documented work instructions, specifically developed by the operation after identifying and evaluating the risks related to the activity. The risk evaluation of the activity is performed in a structured way. The unloading operators are trained and qualified to perform that activity. Records of such trainings as well as field interviews demonstrated that the operators are prepared to perform the unloading activity. The required PPEs (personal protective equipment) for the unloading activity are clearly defined in the work instructions and were evidenced to be used during the field audit. The unloading activity is monitored, by remote cameras, from the control room. It was evidenced also, in the unloading area, remediation procedures (neutralization) in the event of any spills. An emergency office (well equipped with phone, first aid kit, oxygen, masks) is also available in the unloading area.

4. OPERATIONS: Manage cyanide process solutions and waste streams to protect human health and the environment.

Standard of Practice 4.1: *Implement management and operating systems designed to protect human health and the environment utilizing contingency planning and inspection and preventive maintenance procedures.*

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 4.1
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

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A procedure for unloading cyanide solution is in place (POP-04-09-3.5-088 rev03), as well as a procedure for leaching (POP-04.09-3.5-005 rev03) and a procedure for operation of tailing dam (POP-04-09-3.5-020 rev04). JMC uses only liquid cyanide and does not use briquette cyanide in the process.

A procedure to operate tailing dam was presented (POP-04-09-3.5-020 rev04- Definição de limites da concentração de cianeto WAD - item 4); the freeboard for tanks is established on the procedure (POP-04.09-3.5-005 rev03 item 6.5); the safety freeboard for tailing dam is established by the guide "Manual de operação da Barragem de Rejeitos de Jacobina – JM-113-RL-18506-0A" item 4, Tabela I. JMC does not discharge to surface water, as its system is a closed circuit.

It was presented a maintenance program managed by the software DATASUL. Monitoring records to measure thickness of tanks, pipelines and valves were evidenced (E.g. Work orders 21/06/2010 OS-20155524, 21/05/2010 OS-2015106). The procedures POP-04-09-3.5-295 rev 00 and POP-04-09-3.5-296 rev 00 comprehend decontamination of tanks, steel frame and pipelines prior to maintenance.

A procedure to identify when changes in a site's processes or operating practices may increase the potential for the release of cyanide and to incorporate the necessary release prevention measures was checked (Gerenciamento de Mudanças – PCS-00-00-3.5-005 rev00). Two evidences of application of changes management were presented, one related to improvement of containment system, and "adequacy of cyanide reagent area", related to the area waterproofing.

A document for temporary closure is in place (Gerenciamento de Crises" PIS-00-00-3.6-001 rev0). The Emergency Plan (PAE-Plano de Ações Emergenciais Barragem de Rejeitos Atual JM-111-RL-18948-00) establishes which actions to take in case of problems identified during the formal inspections. The Emergency Plan (PAE – Cianeto de sodio, item 3.4) accounts for emergency measures for release situations identified in inspections or out of them.

The operation inspects facilities, as described on the procedure "Operação de Lixiviação" POP 04.04-09-3.5-005 rev03. It mentions that the inspections should be performed each shift work by the operator of the area. The check list used for the leaching area does not focus on the checking of items related to SHE issues. The procedure for cyanide unloading (POP-04-09-3.5-088 rev03) refers to the inspections that should be performed and its frequencies.

A maintenance plan "Manutenção Preventiva e Corretiva das Estruturas Civas" is in place for cyanide unloading areas and leaching plant, including ponds, tanks, pipelines and valves and found in compliance. The checking of tailing dam freeboard and integrity of corta rios is recorded in the RDOS – Daily Report of Operation and Safety.

There are inspections records for the RDOS – Daily Report of Operation and Safety, including name of inspector, signature, date of inspection, corrective action and revision status.

The operation have necessary emergency power resources to operate pumps and other equipment to prevent unintentional releases and exposures in the event its primary source of power is interrupted, as confirmed in the maintenance plan managed by the software DATA SUL. Evidences found from 07/05/2010 to 06/07/2010.

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Standard of Practice 4.2: *Introduce management and operating systems to minimize cyanide use, thereby limiting concentrations of cyanide in mill tailings.*

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 4.2
not in compliance with
not subject to

Summarize the basis for this Finding/Deficiencies Identified:

JMC has ball mill in its process, however no cyanide is added into it, but in the leaching tank TK03. A procedure "procedimento para teste de garrafão – POP-04-09-3.5-253 rev00" to determine appropriate cyanide addition rates is in place. The mineralogical conditions are stable, according to the 2008 and 2009 Annual Mining Reports, and do not present significant variations that demand frequent analysis to determine the optimal cyanide concentration to be used in the leaching process. The latest reports "Otimização de consumo de Cianeto de Sódio – Planta Metalúrgica da JMC" related to June 2009 and February 2010, presented the same result. (that reassert the mineralogical characteristics are stable). JMC has concluded that no other strategy to determine the optimal cyanide level for gold recovering is needed, as the characteristic of ore in the mine is constant. As reassured by the geology staff and checked in the 2008 and 2009 Annual Mining Reports, the mineralogical conditions present such an uniformity that exempt the frequent evaluation of cyanide added to the leaching process.

Standard of Practice 4.3: *Implement a comprehensive water management program to protect against unintentional releases.*

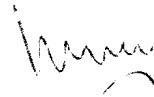
The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 4.3
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The operation has developed a comprehensive, probabilistic water balance, as checked in the water balance document "Balanço Hídrico Planta Metalúrgica de Jacobina Mineração e Comercio – 2010 rev.01" and "Balanço Hídrico do Reservatório de Rejeitos – JM-112-RI-16207-00 ago/2009". They were found integral, as they consider the applicable items to JMC's reality (as per Auditor Guidance item 4.3.1). The balance was found probabilistic as pluviometric data was obtained from Jacobina Pluviometric Station 01140016 and the evaporation obtained from Meteorology National Institute INMET, and extreme conditions were accounted.

The leaching process does not perform heap leach. The deposition rate at tailing dam was considered (Item 11, Balanço Hídrico Planta Metalúrgica de Jacobina Mineração e Comercio – 2010 rev.01).

The water balance considers design storm duration and storm return interval in the study "Balanço Hídrico do Reservatório de Rejeitos – JM-112-RI-16207-00 ago/2009 – item 4". Precipitation and maximum likely precipitation was accounted in the study "Balanço Hídrico Planta Metalúrgica de Jacobina Mineração e Comercio – 2010 rev.02".



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Quality of precipitation and evaporation data are reliable and representative, as they are from official sources: precipitation data from Jacobina Pluviometric Station 01140016, evaporation obtained from Meteorology National Institute - INMET.

It was evidenced that there is no precipitation entering a pond or impoundment resulting from surface run-on from the upgradient watershed, as there are drainers (corta-rios) to deviate precipitation and avoid variations in the total volume of ponds and impoundments.

Freezing and thawing condition are not applicable to this region because of tropical climate.

Evidences were found that besides evaporation, infiltration and reducing of river depth were considered in the study "Balanço Hidrico do Reservatório de Rejeitos – JM-112-R1-16207-00 ago/2009- item 3.2".

The studies "Balanço Hidrico do Reservatório de Rejeitos – JM-112-R1-16207-00 ago/2009" and "Balanço Hidrico Planta Metalurgica de Jacobina Mineração e Comercio – 2010 rev.01" account for power outage scenarios and interlocking systems to act in case of pumping failure.

JMC system operates in close circuit and there is no discharge to surface waters.

No other specific situations that may affect the water balance were found, but that already discussed.

JMC has already defined daily and shift work inspections in the metallurgical plant and tailing dam, a check list for leaching operation and a check list for the tailing dam. Maintenance procedures for equipments were presented such as pipelines, tanks and pumps to ensure their availability and reliability.

The tailing dam presents a freeboard enough to operate in a safe manner according to the water balance. The item 6 of water balance "Balanço Hidrico Planta Metalurgica de Jacobina Mineração e Comercio – 2010 rev.01" presents the capacities of pounds, that are over the volume stored in tanks, according to the design checked.

The operation measure precipitation, compare the results to design assumptions and revise operating practices in a daily basis, according to the records of the report RDOS (Relatório Diário de Operação e Segurança). The report "Relatorio de Avaliação Mensal de Segurança" consolidates the information obtained in the RDOS, interpreting the records and comparing to the design parameters.

Standard of Practice 4.4: Implement measures to protect birds, other wildlife and livestock from adverse effects of cyanide process solutions.

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 4.4
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

A WAD cyanide concentration over 50ppm was found in the leaching tanks. A screen protection to prevent access of wildlife was installed over the leaching tanks TK03, TK04 e TK05. The other leaching tanks TK30, TK31, TK32 e TK33 do not have screen, but the agitation caused by the air process in the slurry become a natural hazing.

Monthly monitoring is performed, as described by the procedure POP-04-09-3.5-219 rev01 and results are recorded on the appraisal report "Registro da Qualidade – Laudo de Análise"

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#0059-00-01/2010, #0024-00-04/2010. Results are satisfactory and below 50ppm WAD cyanide limit.

According to the JMC records, there is no wildlife mortality.

JMC has no heap leach operation.

Standard of Practice 4.5: *Implement measures to protect fish and wildlife from direct and indirect discharges of cyanide process solutions to surface water.*

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 4.5
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

JMC operates in a closed circuit, and does not discharge direct to surface water. JMC is located at Bahia State interior, a desert climate region with few surface waters surrounding.

According to the monitoring records from January, February and March of 2010, the concentration complies with this Standard of Practice. The mixing zone was defined as per environment resolution CONAMA 357/05 chapter I, item XXXVIII.

The operation does not have any indirect discharge to surface water. A failure in a tailing pump has occurred at 27 march 2008, during the startup of the new pumping system, caused overfilling of containment pond (it has small capacity) and discharged to Itapicuruzinho stream. After emergency monitoring results, it was found that the event has not contaminated Itapicuruzinho stream, as the concentration of free cyanide downstream of the mixing zone was below 0,022 mg/l. The corrective actions requested by the incident investigation were totally implemented and were found effective by the auditor.

Standard of Practice 4.6: *Implement measures designed to manage seepage from cyanide facilities to protect the beneficial uses of ground water.*

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 4.6
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified

The cyanide unloading area is waterproofed, according to the appraisal report presented by the company HTP do Brasil and signed by the civil engineer Mauricio Pavese - register CREA-BA # 50073.

According to the monitoring results for groundwater performed by the technical institute SENAI, certified under ISO/IEC 17025, CRL100 WAD cyanide concentrations are below levels that are protective of identified beneficial uses of the groundwater. The results were in compliance to environment parameters requested by the legislation- CONAMA 396/08.

JMC does not use mill tailings as underground backfill.

There is no history of seepage that caused contamination of groundwater.

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Standard of Practice 4.7: *Provide spill prevention or containment measures for process tanks and pipelines.*

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 4.7
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

It was evidenced during the audit that prevention or containment measures were provided for all cyanide unloading, distribution tank and process solution tanks.

Secondary containments are properly designed, as confirmed in the drawing JMC03-300-C-DW-2002. The volume of the tanks exceed 10% of the biggest tank, but, as this is an old plant, the return and storm draining were not considered in the original design of these containment ponds. The drawing and a calculation sheet, signed by a qualified professional, were presented to the auditor.

All secondary containments have sump pump to drive any liquid that may occur in its interior, back to the process. The procedures POP-04-09-3.5-005 rev 03 and POP-04-09-3.5-088 rev03 were checked.

It was evidenced that the plant has all its tanks with secondary containments protecting them.

The audit has checked that all pipelines carrying cyanide solution are protected by lining to avoid any leakage and further contamination of environment.

It was presented the performing of risk analysis accounting for a short pipeline segment crossing Itapueurizinho. Drawing checked for the pipeline protected: JMC02-360-M-2021, JMC02-360-M-2019, JMC02-360-M-2018.

It was evidenced that the construction was performed according to the design during the commissioning and that materials used were compatible to cyanide and high PH conditions.

The appraisal report "Laudo de Conformidade – Estruturas Mecanicas" signed by the mechanical engineer Thiago Almeida Rios Castro - CREA 63448 was checked, and it states the all cyanide tanks and pipelines were constructed of materials compatible with cyanide and high pH conditions.

Standard of Practice 4.8: *Implement quality control/quality assurance procedures to confirm that cyanide facilities are constructed according to accepted engineering standards and specifications.*

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 4.8
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Because of JMC operation time, the original QAQC documents were not available. The compliance report "Relatorio de Conformidade" October 2009, signed by civil engineer Wilton Carlos Muricy Nunes Filho -CREA 92714/D MG, was checked and it states that all facilities were built according to design and Brazilian legislation and operate in adequate condition.

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QAQC programs has addressed materials and soil compaction, as checked in the compliance report "Laudo de Conformidade – Estruturas Mecanicas" signed by mechanical engineer Thiago Almeida Rios Castro CREA 63448 compliance report "Relatorio de Conformidade" October 2009, signed by the civil engineer Wilton Carlos Muricy Nunes Filho- CREA 92714/D MG.

Because of JMC operation time, the original QAQC documents were not available. However, documents to prove the QAQC described are part of JMC file.

Competent professionals registered on the Engineering Brazilian Council – CREA have reviewed cyanide facilities – mechanical engineer Thiago Almeida Rios Castro CREA 63448 and civil engineer Wilton Carlos Muricy Nunes Filho CREA 92714/D MG.

As-built studies presented were developed by qualified personnel and concluded that facilities meet the quality requirements.

Standard of Practice 4.9: Implement monitoring programs to evaluate the effects of cyanide use on wildlife, surface and ground water quality.

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 4.9
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

There is a procedure to manage monitoring activities "Monitoramento das águas superficiais subterraneas e efluentes líquidos - POP-04-02-4.1-170 rev01."

The sampling and analytical protocols were established by the document "Standard Methods for The Examination of Water and Wastewater, 21st edition."

The operational procedure "Monitoramento das águas superficiais subterraneas e efluentes líquidos" POP-04-02-4.1-170 rev01, item 6.2 and 6.3 define how and where samples should be taken, sample preservation techniques; item 5.4 defines chain of custody procedures; item 6.2 Table 1 defines cyanide species to be analyzed.

The record "Monitoramento Hidrico JMC – Ficha de Campo" was checked, but it has no field for wildlife or livestock activity to be filled or wildlife mortality, although some records present evidences of livestock during the data collection.

JMC operates in a closed circuit and does not discharge process water to surface waters. However, as detailed in the Standard of Practice 4.5 and 4.6, JMC monitors WAD, free and total cyanide in its facilities.

A procedure to investigate wildlife mortality is in place. Records of wildlife mortality were evidenced during the inspection of tailing and plant and no mortality was associated to contact with or ingestion of cyanide.

The surface water monitoring has a daily frequency defined, monitoring of surface water are performed monthly and monitoring of wildlife is performed daily. The auditor has found that this frequencies are adequate.

5. DECOMMISSIONING: *Protect communities and the environment from cyanide through development and implementation of decommissioning plans for cyanide facilities*

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Standard of Practice 5.1: *Plan and implement procedures for effective decommissioning of cyanide facilities to protect human health, wildlife and livestock.*

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 5.1
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

A procedure for decontamination “Descontaminação de Cianeto da Planta Metalurgica – POP-04-09-3.5-290 rev 00” is implemented. The decommissioning process also defines how to act to remove residual reagents from leaching process. Formal actions to manage surface water and groundwater are included in the Decommissioning Plan.

The decommissioning activities have a schedule for the three years planned for total decommissioning. Evidenced on the closure plan “Plano de Fechamento Final”.

The document “Controle de Documentos – Lista Mestra de Documentos Internos da JMC” defines which decommissioning procedures should be taken annually.

Standard of Practice 5.2: *Establish an assurance mechanism capable of fully funding cyanide related decommissioning activities.*

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 5.2
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

There is a cost estimation consolidated in the corporative document “Closure”, which is provided by the detailed costs reported on the document “PRAD – Plano de Recuperação de Áreas Degradadas. YJC1 Rev.1 – YCJ1R01_Memoria Custos Fechamento_04_04_07.”

The corporate document for cost estimation “Closure” is reviewed quarterly.

JMC has decided to have a self-insurance to cover the estimated costs for cyanide-related decommissioning activities.

The report issued by the third-party company Deloitte Touche Tohmatsu Auditores Independentes, and signed by the accountant auditors CRC # 2 SP 011609/O-8 e CRC # 1 SP 130990/O-4 was presented. The report states that the financial evaluation methodology complies with brazilian accounting practices defined by the accounting committee “Comitê de Pronunciamentos Contábeis – CPC”, following criteria established by “Lei das Sociedades por Ações (# 6.404/76)”, with changes from legislation “Leis #11.638/07 and #11.941/09 (Regime Tributário de Transição – RTT)”. This report presents a statement by a qualified financial auditor that it has sufficient financial strength to fulfill this obligation.

6. WORKER SAFETY: *Protect workers’ health and safety from exposure to cyanide.*

Standard of Practice 6.1: *Identify potential cyanide exposure scenarios and take measures as necessary to eliminate, reduce or control them.*

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The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 6.1
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

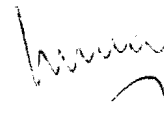
The operation identified and evaluated all the SHE risks associated with the cyanide and, in order to have the risks under control and mitigated, the operation defined, documented and implemented specific operational procedures for cyanide related activities. The risk identification and evaluation process is performed in a structured way and involves different stakeholders. The development of work instructions are performed in conjunction by these stakeholders (operators, supervisors, managers and SHE professionals). The required PPEs for each activity (unloading, leaching, maintenance, neutralization, confined spaces) are defined and addressed in the documented work instructions. In order to maintain the risk evaluation updated and, in consequence, the work instructions, the operations established a procedure to update them if any circumstance has changed or, at least, once a year. This procedure is part of the annual refreshing program for supervisors and operators.

Standard of Practice 6.2: *Operate and monitor cyanide facilities to protect worker health and safety and periodically evaluate the effectiveness of health and safety measures.*

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 6.2
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The operation determined that the minimum pH value shall be equal or greater than 10.5. The pH is effectively controlled and monitored (through calibrated pHmeter) in the operation. Alarm systems are in place. Verified, during the field audit, that the usual pH value is around 13. The pH is controlled through the online addition of a CaOH solution (concentration above 30%). The operation has fixed calibrated HCN detectors in the tank leaching area and the operators also use portable calibrated HCN detectors. Both cases evidenced in the field audit. The fix and portable HCN detectors, are maintained and calibrated in accordance with a calibration management system. Reviewed calibration records of all HCN detectors. It was evidenced during the field audit, that the operation premises (cyanide circuit) and richly signed, including the prohibition of drinking, eating and smoking in these areas. Auxiliary emergency installations/ equipments such as eye-wash, showers, fire extinguishers, as well as emergency offices (equipped with first aid response kit, oxygen, masks, phone), were evidenced in the operation premises. Some of these auxiliary installations were tested during the audit and worked well. Also evidenced that that the operation implemented a fire extinguisher (CO2 and dry powder) management system, in order to maintain these auxiliary equipments under good operational condition. It was evidenced, during the field audit, that the operation installations (tanks, piping, valves, pumps) are in good shape, the tanks and piping are adequately painted and signed, the cyanide



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flow identified. Cyanide MSDS is also available (in Portuguese) in the plant. It was evidenced that the operation has defined and implemented procedures to evaluate SHE incidents. Any cyanide related incident occurred in the plant, this year.

Standard of Practice 6.3: *Develop and implement emergency response plans and procedures to respond to worker exposure to cyanide.*

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 6.3
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The operation has an emergency office inside the leaching plant and a health care center, fully equipped with two resuscitator (one fix and the other mobile), two ambulances, antidote kits, telephone, radio, oxygen cylinders.

These facilities were evidenced in the field audit.

All the first aid equipment are effectively inspected by the local nurses, on a monthly basis, including the ambulances. Evidenced the inspection records.

The antidotes are stored under controlled conditions, into a refrigerator and their validity are monthly checked.

The operation has also a health care center (one doctor, one occupational health nurse and four technical nurses), also equipped with oxygen center, antidotes, two ambulances and two resuscitator . Both installations and personnel were evidenced during the field audit.

The operation has two ambulances and qualified the local hospital (Santa Bárbara Hospital, at Jacobina city). The transportation procedures are tested, at least, once a year. The Santa Bárbara Hospital was visited during the field audit and found to have an adequate infrastructure to assist cyanide contaminated personnel.

It was evidenced that cyanide related emergency drills are effectively performed by the operation, including and involving the local Hospital team in the exercises. Evidenced 2010 Annual emergency mock plan and related drills records.

7. EMERGENCY RESPONSE *Protect communities and the environment through the development of emergency response strategies and capabilities.*

Standard of Practice 7.1: *Prepare detailed emergency response plans for potential cyanide releases.*

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 7.1
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

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It was evidenced, during the system audit, that the operation has identified and evaluated, in a structured way, all the cyanide related risks (real and potential ones). Based on this risk evaluation, the operation developed general and specific cyanide related emergency response plans. These plans were developed by multi-disciplinary stakeholders and communicated / shared with the community representatives.

Standard of Practice 7.2: *Involve site personnel and stakeholders in the planning process.*

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 7.2
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

It was evidenced, during the system audit, that the operation has identified and evaluated, in a structured way, all the cyanide related risks (real and potential ones). Based on this risk evaluation, the operation developed general and specific cyanide related emergency response plans. These plans were developed by multi-disciplinary stakeholders and communicated / shared with the community representatives.

The emergency response plan (PAE) was reviewed, approved and communicated to several stakeholders (internal and external), including security and health authorities, public authorities, emergency response suppliers (SOS Cotec), community representatives. When performing emergency drills, the operation invites specific stakeholders to participate in the drills. Another implemented control is to perform periodic meetings with stakeholders, in order to discuss and updated (if necessary) the emergency response plan.

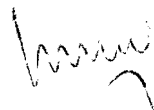
Standard of Practice 7.3: *Designate appropriate personnel and commit necessary equipment and resources for emergency response.*

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 7.3
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

It was evidenced that the operation, based on the real and potential cyanide related risks, developed general and specific emergency plans, involving several stakeholders in this development. The required resources (human, hardware, communication, suppliers, installations) to implement such plans were identified also. The operation has prepared specific personnel to act and respond in emergency situations as well as external suppliers (hospital, emergency responders related to cyanide transport) were qualified. It was evidenced (during the field audit) that the operation has available specific hardware to respond to emergency situations, such as ambulances, emergency trucks, antidote kits, PPEs, defibrillator, neutralization materials. Such hardware are monthly inspected. Records of such inspections were evidenced.

The emergency plan and brigade are frequently tested through planned emergency drills. Records of such drills were evidenced.



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Standard of Practice 7.4: *Develop procedures for internal and external emergency notification and reporting.*

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 7.4
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The Plan includes procedures and contact information for notifying management, regulatory agencies, outside response providers and medical facilities of the cyanide emergency. Also, the Plan includes procedures and contact information for notifying communities of the cyanide emergency. The emergency response plan (PAE) was reviewed, approved and communicated to several stakeholders (internal and external), including security and health authorities, public authorities, emergency response suppliers (SOS Cotec), community representatives. The plan clearly defines the communication procedures to be used during an cyanide related emergency including (but not limited to) a list of emergency telephones (24h) of all emergency brigade members, leaders, managers and general manager (emergency response leader), public authorities, hospital, response suppliers, cyanide supplier, cyanide transporter. The communication procedures also involves the security process of the operation. Resources, such as radios and fix, cell and satellite phones were evidenced. During the audit, these communication procedures were checked and worked well. When performing emergency drills, the operation invites specific stakeholders to participate in the drills. Another implemented control is to perform periodic meetings with stakeholders, in order to discuss and updated (if necessary) the emergency response plan. The emergency communication loop is clearly defined and also contact information is available in the plan and at the security process. In all potential emergency situations, the public authorities are the ones (external stakeholder) to be informed in order to participate in the mitigation efforts.

Standard of Practice 7.5: *Incorporate into response plans and remediation measures monitoring elements that account for the additional hazards of using cyanide treatment chemicals.*

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 7.5
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

It was evidenced that the developed emergency plans considered the recovery or neutralization of solutions, the decontamination of soils or other contaminated media, the management and disposal of spill clean-up debris and the provision of an alternate drinking water supply.

The emergency plan prohibit the use of chemicals such as sodium hypochlorite, ferrous sulfate and hydrogen peroxide to treat cyanide that has been released into surface water.

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The potential need for environmental monitoring to identify the extent and effects of a cyanide release, including sampling methodologies, parameters and, where practical, possible sampling locations are addressed in the emergency plans.

Standard of Practice 7.6: *Periodically evaluate response procedures and capabilities and revise them as needed.*

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 7.6
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

Evidenced the 2010 Annual Emergency Drill plan. Evidenced three emergency drills performed up to date, involving NaCN leakage during unloading, NaCN transportation and HCN intoxication.

After each emergency drill, the drill results are reviewed and discussed among the participants. The opportunities of improvement raise-up during the drills are considered as corrective or preventive actions and managed adequately. Reports related to the drills and their review were found in place.

8. TRAINING: Train workers and emergency response personnel to manage cyanide in a safe and environmentally protective manner.

Standard of Practice 8.1: *Train workers to understand the hazards associated with cyanide use.*

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 8.1
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

The procedure for training "Treinamento Interno – POP-04-05-3.4-255 rev01" defines the training strategies for the personnel working in cyanide areas. Training records were found and they include cyanide hazard recognition for security, maintenance and plant personnel.

It was evidenced a formal refresher training periodicity in the procedure POP-04-05-3.4-255 rev01 item 6.

Records of contractor training at 21/08/2009, 19/08/2009 were presented, as well as records of trainings held for the employees #10686, #9573, #10968, including training evaluation records.

Standard of Practice 8.2: *Train appropriate personnel to operate the facility according to systems and procedures that protect human health, the community and the environment.*

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 8.2
not in compliance with

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Summarize the basis for this Finding/Deficiencies Identified:

All trainings, divided by position, and its duration, were inserted into the software DATASUL. It was found evidences of trainings (e.g. plant operator (9562)). Plant employees are trained to perform liquid cyanide unloading, operate facilities and several maintenance activities. All trainings present safety, health and environment hazards.

The auditor has evidenced that the training elements necessary for each job involving cyanide management are identified in training materials.

The procedure POP-04-05-3.4-255 rev01 item 5.2 defines the qualification of instructors. All instructors were trained in andragogical teaching techniques and complies with the procedure requirements.

All new or transferred employees have introduction training covering general and specific cyanide hazards.

There is a refresher training on cyanide management provided to ensure that employees continue to perform their jobs in a safe and environmentally protective manner. The document "Plano de Atividades" mentions that refresh training is linked to procedures and processes review. Records were presented.

The operation evaluate the effectiveness of cyanide training by testing and observation, as checked in evaluation records and planned task observations (OPT) which should be applied three months after training. In case of low evaluation result, the employee should be trained again, restarting the entire process.

Training records were presented, including employee and instructor names, topics covered and test records.

Standard of Practice 8.3: *Train appropriate workers and personnel to respond to worker exposures and environmental releases of cyanide.*

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 8.3
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

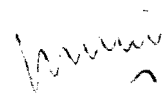
There are evidences that plant operators and maintenance employees have collaborated to elaborate the Emergency Plan (PAE).

Training records for rescue team and first aid held in 27/08/2009, 21/10/2008, 23/03/2010 were found, including plant operators and maintenance employees. The decontamination training was held by the company specialized SOSCOTEC.

9. DIALOGUE: Engage in public consultation and disclosure.

Standard of Practice 9.1: *Provide stakeholders the opportunity to communicate issues of concern.*

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 9.1
not in compliance with



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Summarize the basis for this Finding/Deficiencies Identified:

An opening program "Portas Abertas" is in place to meet community members, local organization members, public prosecutor and associations. A contract was signed between JMC and a telephone company to provide a toll free number 0800 so that community members can communicate its concerns more easily. Reception phone numbers were also published to the community and stakeholders. There is also a contract (#1039/2010) between JMC and a local newspaper "Jornal a Semana" to allow JMC to release safety, health and environment issues weekly.

Standard of Practice 9.2: *Initiate dialogue describing cyanide management procedures and responsively address identified concerns.*

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 9.2
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

There are evidences of visits from Itapicuru community, located close to JMC, and information material was distributed containing cyanide information, emergency phone numbers and others. The Sustainability Report was also delivered to the City Hall, district associations, radios, Public Prosecutor and universities.

Standard of Practice 9.3: *Make appropriate operational and environmental information regarding cyanide available to stakeholders.*

The operation is **X** in full compliance with
in substantial compliance with Standard of Practice 9.3
not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

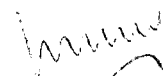
There is an information material with simplified information about cyanide management at JMC. Evidences of meeting (16/10/2008, 27/10/2010) with several municipal organizations, police, municipal secretariat, hospitals, communities were checked, where the material was also distributed.

Visits of JMC public relationship representatives to Itapicuru community are recorded. In these visits, information like cyanide management and hazards were distributed.

There are no occurrences related to:

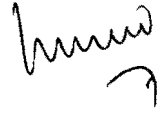
- a) Cyanide exposure resulting in hospitalization or fatality
- b) Cyanide releases off the mine site requiring response or remediation
- c) Cyanide releases on or off the mine site resulting in significant adverse effects to health or the environment
- d) Cyanide releases on or off the mine site requiring reporting under applicable regulations
- e) Releases that are or that cause applicable limits for cyanide to be exceeded

In June 2008, a small tailing slurry release has occurred, reaching the Itapicuruzinho stream, however with no contamination. Community and stakeholders were informed by the press



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releases in the newspapers "A Tribuna Regional" and "A Semana", local radios "Jacobina FM" and "Serrana FM". The information was also included in the Sustainability Report 2008.

A handwritten signature in black ink, consisting of several loops and a final downward stroke.